

de Franckfort-sur-Mein, par M. le Docteur Rüppell);”* and M. Temminck gives their differences as follows, admitting both into the European fauna. The *Chasse-fiente* (*G. Kolbei*), according to this naturalist, may be distinguished at all ages from the true *Vautour Griffon* (*G. fulvus*) by the shape of the feathers on the wings and under-parts, all of which are rounded at tip, whereas in the *Griffon* the same feathers are long and acuminate; the ruff also is not so long nor so abundant. General colour of the plumage of *G. Kolbei* pale *café-au-lait* or isabelline, often (or according to age) varied or margined with brown more or less deep. The adult is almost wholly of a whitish isabelline; whereas the plumage of the adult *Griffon* is light brown throughout. The crop of the *Chasse-fiente* is of a deep brown, the head and neck covered with close flat down. A fine adult in the Society’s museum from Algeria (received from M. Malherbe) accords with this description of the *Chasse-fiente*; while a young bird from Nepal (in much worn plumage) seems to correspond with the *Griffon*. Dr. Schlegel classes the *Chasse-fiente* as a permanent variety of *G. fulvus*, terming it *Vultur fulvus occidentalis*.

Lastly, Mr. John Cassin, in his notes on the *Vulturidæ* in the collection of the Academy of Natural Sciences of Philadelphia (published in the ‘Proceedings’ of that Academy for 1849, p. 158), remarks finally on the question as to the plurality of species confounded under *G. fulvus*, that—“In the present case the number of specimens” (16!) “is not sufficiently large to warrant a conclusion, but they appear to present uniformly different characters enough to induce the opinion that the following are specifically distinct;—*Gyps fulvus*, (Gm.); *G. Kolbei* (Daud.); *G. indicus*, (Tem.); and *G. tenuirostris*, (Hodgson);” though he afterwards expresses a doubt with regard to the correct identification of the last, and believes the *G. indicus*, (Tem.), to be from Africa! Mr. Jerdon, however, considers that M. Temminck’s plate of his *Vultur indicus* represents the young of *G. bengalensis*, (Gmelin).

75. *G. INDICUS* (Gray and Mitchell, *Ill. Gen. Birds*, pl. 3).

SYN. *Vultur indicus*, Scopoli and Latham.

* Dr. Rüppell himself, however, now considers them to be the same. Vide his *Systematische uebersicht der Vögel Nord-ost Africa’s &c.* (1845), p. 9.

V. tenuiceps et tenuirostris, Hodgson.

HAB. India and Malay countries.

Remark. This is the only Vulture which we have seen from the Malayan peninsula, and it appears to be common in open country throughout India, never (that we have observed) coming into towns or populous neighbourhoods. Like *G. fulvus*, it has 14 tail-feathers, *G. bengalensis* having constantly but 12;* and it is remarkable for the elongation of the ceral portion of the bill, and narrow form of the head, as compared with *G. bengalensis*; the bill and head of *G. fulvus* being intermediate. Its plumage much resembles that of *G. fulvus*; but old birds have merely a few small scattered downy tufts on the black naked neck. The original description of this species by Sonnerat refers to an individual of the second year.

76. *G. BENGALENSIS* (Hardwicke's *Ill. Ind. Zool.*).SYN. *Vultur bengalensis*, Gmelin (the young).*V. indicus*, Tem. (young, apud Jerdon in *epistola*).*V. chagoun*, Daudin } adult.*V. leuconotus*, Gray }

HAB. India generally: Tenasserim provinces. A summer visitant in Afghanistan. Very abundant in populous neighbourhoods, about the outskirts of towns and villages, and occasionally even alighting in the streets, shewing little fear or distrust of the passers-by.† In the open country it is replaced by the preceding species. According to Rüppell, *G. bengalensis* also inhabits Sennaar.

Subfam. SARCORHAMPHINÆ.

Genus NEOPHRON, Savigny.

77. *N. PERCNOPTERUS* (Pl. *Enl.* 407, 429).SYN. *Vultur percnopterus*, L. (nec Pallas).*V. leucocephalus* et *V. fuscus*, Gmelin.

* From the Parrots and Birds of prey until we come to certain Pigeons, there is no other instance of the number of tail-feathers exceeding twelve.

† On one occasion, when a number of these Vultures had descended in the Society's compound at sight of some flesh, I observed a particularly fine adult, which I directed an attendant to entice by throwing to it morsels of meat nearer and nearer, when it was taken without difficulty by the hand. On seizing it by the wing, the Vulture struggled to escape, but made no attempt at defence. Its companions,

V. ginginianus et *V. albus*, Daudin.

V. meleagris, Pallas.

V. fuscus, Boddaërt.

V. leucocephalus, Brisson.

Pernopterus ægyptiacus, Stephens.

Sūgra, or *Sūndá*, ('sharp-scented,') Sindh (Burnes).

HAB. Warmer regions of Europe, Asia, and Africa: abundant on the plains of India; rare and accidental below the tideway of the rivers in Lower Bengal. A summer visitant in Afghanistan.

Fam. GYPÆTIDÆ.

Genus GYPÆTOS, Storr.

78. *G. HEMACHALANUS*, Hutton, *J. A. S.* III, 522.

G. barbatus orientalis (?), Schlegel and Pr. Bonap.

Ūrgūl, Masuri (Hutton): *Kajir*, or *Fumai*, Kabul (Burnes). *Golden Eagle* of English residents in the Himalaya.

HAB. Himalaya; Afghanistan.

Remark. There appear to be three closely affined species or races of Lammérgeyers, namely *G. barbatus* of the Alps and higher mountains of S. E. Europe and probably Asia Minor,—*G. meridionalis*, Brehm, of N. Africa and found also on the Pyrenees and in Sardinia,—and the present Asiatic race distinguished by a pectoral band, in general conspicuously developed, and which would appear never to occur in the others. *G. meridionalis* is recognized as a permanent variety of *G. barbatus* by Dr. Schlegel, equivalent to his distinction of *Circus Sykesii* from *Circus cinerascens*; but M. Degland regards it as insufficiently distinguished, it being merely of inferior dimensions and less robust.

however, immediately took the alarm, but without going away, and would not be enticed near enough to allow of a second capture. It is remarkable that during some years these Vultures come much more into the town of Calcutta than in other years; for, in general, they are little seen except about the abattoirs and place of cremation.

Tribe. NOCTURNÆ.*

Fam. STRIGIDÆ.†

Hulu, *Jaghal*, and *Būm* (Pers.), *H.*; *Hūtūm*, and *Pencha*, *B.*; *Bassá*, Cingh.

Subfam. BUBONINÆ.

Genus BUBO, Sibbald.‡

79. B. ORIENTALIS (*Pl. Col.* 174, 229).

SYN. *Strix orientalis*, Horsfield.

S. sumatrana, Raffles.

S. strepitans, Temminck.

B. et Huhua nipalensis, Hodgson.

H. pectoralis, Jerdon.§

Huhua and *Huhu chil*, ('Howler'?, or 'Howling Kite'?,)

Nepal (Hodgson): *Ūman*, Malabar (Jerdon).

HAB. S. E. Himalaya; S. India; and Malay countries.

80. B. BENGALENSIS (Gould's 'Century,' pl. 3).

SYN. *Otus bengalensis*, Franklin.

Bubo caveareus et *Urrua cavearea*, Hodgson.

Ghughu, *H.* (Jerdon).||

HAB. India generally; Afghanistan: but not met with below the tideway of the rivers in Lower Bengal.

* Vide p. 317.

† The Owl family primarily divides into three subfamilies, viz. :—

1. BUBONINÆ. Comprising all the species with *aigrettes*, or the 'Horned Owls,' inclusive of *Nyctea* which has distinct though small *aigrettes*.

2. SURNINÆ. *Athene*, *Syrnium*, and their numerous (and chiefly intermediate) affines.

3. STRIGINÆ. *Phodilus*, *Strix* (as now limited), and *Glaux*.

‡ We have been assured of the existence of BUBO MAXIMUS, Sibbald, in the Himalaya, in addition to *B. bengalensis*, *Ketupa flavipes*, &c., but have seen no specimen. Mr. Gould has seen it from China.

§ *Bubo pectoralis*, (Jerdon), from the Himalaya, is given as a distinct species from *B. orientalis* (v. *nipalensis*) from Java, in Mr. John Cassin's Catalogue of the *Strigidae* in the collection of the Academy of Natural Sciences of Philadelphia (1849).

|| In Bengal, this name is applied to the Doves (*Turtur*). In either case, it derives evidently from the voice. So, also, *Hulu*, *H.*, *Ulula*, latin (whence *Ululo*), and *Owl* (and *howl*), English, &c. Again, *Ūllū*, *H.*, *Ūllūk*, Beng., for the *Hylobates hoolock*.

81. B. COROMANDER (Hardw. *Ill. Ind. Zool.*,—very bad).SYN. *Strix coromandra*, Latham.*Urrua umbrata*, Blyth.

HAB. India generally.

Genus ASIO, Brisson.

82. A. OTUS (*Pl. Enl.* 29 ; Gould's *B. E.* pl. 39).SYN. *Strix otus*, L.*S. soloniensis*, Gmelin.*S. diminuta*, Pallas.*Otus albicollis*, Daudin.*O. europæus*, Stephens.*O. communis*, Lesson.*O. vulgaris*, Fleming.*O. sylvestris*, *arboreus*, et *gracilis*, Brehm.*O. Wilsonianus*, Lesson. } American.*O. americanus*, Bonap. }

HAB. Europe and N. Asia ; Himalaya ; N. Africa ; N. America ?

Remark. The N. American race, regarded as distinct by some authors, is considered by Mr. G. R. Gray to be identical with that of the Old World. Vide Brit. Mus. Catalogue of *Raptores* (1848).

83. O. BRACHYOTUS (*Pl. Enl.* 438 ; Gould's *B. E.* pl. 40).SYN. *Strix brachyotus*, L.*S. ulula*, *cæglius*, et *accipitrina*, Pallas.*S. arctica*, Sparrman.*S. tripennis*, Schrank.*S. palustris*, Smies.*S. caspia*, Shaw.*S. brachyura*, Nilsson.*Otus palustris* et *agrarius*, Brehm.*Chotá Ghughu* ('small Owl'), H. (Jerdon).

HAB. Europe, Asia, Africa, and N. and S. America. India generally, visiting the plains in winter.

Genus SCOPS, Savigny.

84. SC. ALDROVANDI, Ray (Gould's *B. E.* pl. 41 ; Jerdon's *Ill. Ind. Orn.* pl. 41, chesnut variety).SYN. *Strix scops*, L.

S. zorca et *giu*, Scopoli.

S. pulchella, Pallas.

S. carniolica, Gmelin.

S. ephialtes, Savigny.

S. bahamæna (?), Pennant.

Scops europæus, Lesson.

Sc. senegalensis, Swainson.

Sc. capensis, Smith.

Sc. sunia (chesnut variety), and *Sc. pennata* (grey variety),
Hodgson.

Sc. malayanus, A. Hay.

Sc. rutilus, Pucheran, *Rev. Zool. &c.*, 1849, p. 299.

Ephialtes spilocephalus (?), Blyth, the young?

Otus (Scops) japonicus, et *O. (Sc.) africanus*, Tem. (apud
G. R. Gray).

Chitta gul ('small Owl?'), Telinga (Jerdon): *Chugad kusial*, or
Sunya kusial, Nepal (Hodgson).

HAB. Europe, Asia, and Africa: in Europe migratory.

Remark. In India, Burma, &c., this species assumes a phase of plumage very commonly, which does not appear to have been ever observed in Europe, and in Africa but rarely;* though frequent also in *Sc. asio* of N. America, and a similar variation (though to a less extent) occurs likewise in *Syrnium aluco*, as well as in some of the *Podargi*. It is characteristic neither of age nor sex. The phase referred to is a bright chesnut-rufous colouring, more or less deep, with the markings sometimes nearly obsolete, except the black tips of the ruff and under-scapularies, and some streaks on the breast and flanks, the belly and lower tail-coverts continuing white with the usual markings. The aigrettes (so far as we have seen) are always rufous in Indian specimens; and there is generally a strong tinge of this hue upon the wings. We continue to doubt whether *Scops spilocephalus*, nobis (*J. A. S.* xv. 8), should not rather be considered a distinct species, even after examination of a second specimen; and an *Ephialtes gymno-*

* *Sc. rutilus*, Pucheran, is from Madagascar; and M. Alfred Malherbe mentions a specimen from Algeria "d'un roux vif rayé de noir et de cendré." *Catal. Rais. d'Ois. de l'Algerie*, p. 8. An Algerian specimen sent by that gentleman to the Society's museum has a considerable admixture of rufous in its colouring.

podus, G. R. Gray, MS., from "India," is retained as distinct in Mr. Gray's second catalogue of the *Raptores* in the British Museum.

85. SC. SUPERCILIARIS? (*Pl. Col.* 21 ?).*

SYN. *Strix supercilialis* (?), Vieillot (vide *Rev. Zool. &c.*, 1849, p. 19).

S. rufescens, Horsfield.

S. Sonneratii (?), Temminck.

Ephialtes sagittata, Cassin.

HAB. Malayan peninsula and archipelago. (Not India.)

86. SC. LEMPIJI (*Pl. Col.* 99).

SYN. *Strix lempiji*, Horsfield.

S. noctula, Reinwardt.

Scops javanicus, Lesson.

Sc. lettia, Hodgson.

Sc. lettioides et *griseus*, Jerdon.

Lempiji, Java (Horsfield); *Tharkavi Chugad*, or *Lattya Kudyal*, Nepal (Hodgson).

HAB. In different varieties, India, China (?), and the Malay countries.

Remark. Specimens of this bird from the sub-Himalayas, Asám, Sylhet, Arakan, and the Tenasserim provinces, are generally (but not always) larger than those from S. India and Ceylon, while examples from the Malay countries are, for the most part, deeply tinged with rufous-brown.

Genus KETUPA, Lesson.

87. K. FLAVIPES.

SYN. *Cultrunguis flavipes*, Hodgson.

HAB. Himalaya only (so far as hitherto observed).

88. K. CEYLONENSIS (Hardwicke's *Ill. Ind. Zool.*)

SYN. *Strix ceylonensis*, Latham.

S. Leschenaultii, Temminck.

S. Hardwickii, Gray.

S. dumeticola, Tickell.

Cultrunguis nigripes, Hodgson.

* Unfortunately, we have never seen the *Planches Coloriées* of M. Temminck; the only copy in Calcutta being, to us, inaccessible.

Ūlu (generic), H. ; also *Amra ka Ghugu*, H. (Jerdon) :

Hutūm (generic), Beng. ; *Tee-dook*, Arakan (Phayre).

HAB. India generally ; Ceylon ; Asám ; Arakan ; Tenasserim provinces ; very common in Lower Bengal.

89. K. JAVANENSIS, LESSON (Tem., *Pl. Col.* 74).

SYN. *Strix ketupu*, Horsfield.

S. ceylonensis apud Temminck.

Tamba, or *Ketombo Ratanapye* ; *Hanta*, *Pelow*, *Malayan* : *Blo ketupu*, Java.

HAB. Malayan peninsula and archipelago : rare in Arakan.*

Subfam. SURNINÆ.

Genus ATHENE, Boie.

90. ATH. CUCULOIDES (Gould's 'Century,' pl. 4).

SYN. *Noctua cuculoides*, Vigors.

N. auribarbis, Hodgson.

Dzee-gwet, Arakan (Phayre).

HAB. Himalaya ; Asám ; Arakan ; Tenasserim provinces ; China (Chusan).

91. ATH. RADIATA.

SYN. *Strix radiata*, Tickell.

Athene erythropterus, Gould.

Noctua perlineata, Hodgson.

N. cuculoides apud Jerdon, *Catal.*

Ath. undulatus apud Blyth, *J. A. S.* XI, 457.

Jungli Choghud, H. (Jerdon) : *Chotá Kúl-panchá* ('small Death-Owl'), Beng. ; *Chugad*, Nepal (Hodgson).

HAB. Most parts of India ; Sub-Himalayan regions : never on the alluvium of the Gangetic delta, but appears immediately this is quitted in a westerly direction.

92. ATH. MALABARICA, Blyth, *J. A. S.* XV, 280.

SYN. *Ath. castanoptera* apud Jerdon, *Supp.*

HAB. Malabar.

* Mr. Cassin gives "India" as the locality for a specimen of this bird : but we have never heard of its occurrence on the western side of the Bay of Bengal, and know but of one instance of its being obtained so high as in Arakan.

93. *ATH. CASTANOTUS*, Blyth, Museum Catalogue.

SYN. *Ath. castanoptera* apud Blyth, *J. A. S.* XV, 280.

Pancha Bassá ('small Owl'), Cingh.

HAB. Ceylon (where common).*

94. *ATH. BRODIEI*.

SYN. *Noctua Brodiei*, Burton.

N. tubiger et *Athene badia*, Hodgson.

HAB. Himalaya.

95. *ATH. BRAMA* (*Pl. Col.* 68).

SYN. *Strix brama*, Temminck.

Noctua indica, Franklin.

N. tarayensis, Hodgson.

Káturiá Pencha, ('wood-Owl,' *i. e.* that hides in cavities of wood), Beng.; *Khukhusat*, Upper Hindustan; *Chugad*, or *Choghud*, H.; *Pungla*, Mahratta.

HAB. India generally to foot of Himalaya; Asám; Sylhet; extremely common in Lower Bengal: Persia (as about Erzeroum).†

Genus *NINOX*, Hodgson.

96. *N. SCUTELLATUS* (*Pl. Col.* 289).

SYN. *Strix scutellata*, Raffles.

S. hirsuta, Temminck.

S. lugubris, Tickell.

Ninox nipalensis, Hodgson.

Athene malayensis, Eyton.

Kál Pencha ('Death-Owl'), Bengal: *Choghud Besra* ('Hawk Owl'), H. (Jerdon): *Kheng-boop*, Arakan (Phayre): *Raja Wali*, Malayan.

HAB. India generally; Ceylon; Burmese and Malay countries:

* The Malayan *Ath. castanoptera*, (Horsfield, v. *spadicea*, Reinwardt), is mentioned as an inhabitant of the Tenasserim provinces by Dr. Helfer, and he is probably correct; but as Nos. 91, 92, and 93, are nearly affined to *Ath. castanoptera*, we must consider the Tenasserim species as needing satisfactory determination.

† *ATH. PSILODACTYLA*, (L., apud Boie), v. *Strix noctua*, Retzius, *S. nudipes*, Nilsson, *S. passerina* apud Latham and Temminck, *Ath. bactrianus*, Blyth, *J. A. S.* XVI, 776, &c., inhabits middle Asia, as Afghanistan and Tibet, but does not appear to have been observed in the Himalaya. *Strix persica*, Vicillot, is probably a variety. Vide *Rev. Zool. &c.* 1849, p. 18.

not rare in Lower Bengal. Madagascar (Dr. A. Smith, *Afr. Zool.*, p. 163).

Genus SYRNIUM, Savigny.

97. S. INDRANI (Gray's *Ill. Gen. Birds*, pl. 14).

SYN. *Strix indranee*, Sykes.

Ulula? et *Bulaca newarensis*, Hodgson.

Bulaca monticola, Jerdon.

Newar, Nepal (Hodgson); *Loco Bassa* ('large Owl'),
Cingh. (Layard).

HAB. Mountainous parts of India generally; Ceylon; Tenasserim provinces; Malayan peninsula.

Remark. We are strongly inclined to suspect that there exist two races of this bird, one of larger size peculiar to the Himalaya, the other alike in Central and S. India, Ceylon, and the Malayan peninsula.

98. S. SELOPUTO (Tem., *Pl. Col.* 230).

SYN. *Strix seloputo*, Horsfield.

S. pagodarum, Temminck.

HAB. Tenasserim provinces; Nicobar islands; Malayan peninsula and archipelago.

99. S. SINENSE? (Hardw., *Ill. Ind. Zool.*)

SYN. *Strix sinensis* (?), Latham.

S. orientalis, Shaw.

Syrnium ocellatum, Lesson.

HAB. Most parts of India, to foot of Himalaya: not Lower Bengal (at least below the tideway of the rivers). China?

100. S. ALUCO? (Himalayan variety).

SYN. *Strix aluco* (?) et *S. stridula* (?), Gmelin, &c. &c.

Syrnium niviculum, Hodgson.

HAB. Himalaya: Europe; N. Africa; Asia Minor (Strickland); Japan (Temminck).

Remark. On comparison of numerous specimens both from Europe and different parts of the Himalaya, and varying much in plumage from both regions, we can no longer regard them as referable to more than one variable species, although Himalayan examples may generally be distinguished by their darker hue, and the usually greater development of the transverse markings of the plumage.

Subfam. STRIGINÆ.

Genus PHODILUS, Is. Geoffroy.

101. PH. BADIUS (Horsfield's
- Zool. Res. in Java*
- , pl.).

SYN. *Strix badia*, Horsfield.*Wowo-wiwi*, or *Kalong-wiwi*, Java.

HAB. Nepal; Sikim; Asám; Arakan; Tenasserim provinces; Malayan peninsula and archipelago.

Genus STRIX, L. (as restricted).

102. STR. JAVANICA, de Wormb (Gray's
- Ill. Gen. Birds*
- , pl. 15).

SYN. *Str. flammea* of India and the Malay countries, auctorum.

HAB. S. E. Asia and its archipelago. Very common throughout India.

Remark. This species is distinguished from *Str. flammea*, L., by its larger size and especially by its more robust feet and toes.

Genus GLAUX, Blyth.

103. GL. CANDIDA (Jerdon's
- Ill. Ind. Orn.*
- pl. 30).

SYN. *Strix longimembris*, Jerdon.

HAB. Plains of India; common: very rare on the mud-soil of Lower Bengal.

NOTE. Since the conspectus of Indian FALCONIDÆ was published, the author has received several standard works from Europe, among which are the valuable publications of Dr. Rüppell, the 'Manuel d'Ornithologie' of M. Temminck (ed. 1840), and the more recent Manual of European Ornithology of M. Degland. The following remarks occur on reference to these and other works.

FALCO LANARIUS, Schlegel, apud Degland, is by both of these authors identified with *F. Fieldeggii*, Schlegel, the African species which Mr. Strickland considers to be the same as *F. biarmicus* v. *peregrinoides*, &c. &c. (vide p. 319); and is not therefore the Indian *F. JUGGUR* (our No. 17), the adult and young of which have been figured by this name in Gould's 'Birds of Asia.' Dr. Rüppell, in his list of the *Falconidæ* of N. E. Africa (1845),* retains as separate species *F. peregrinoides*, Tem., and *F. biarmicus*, Tem., referring the latter to the subdivision *Tinnunculus*, while he assigns *F. chicquera* to *Falco*;†

* 'Systematische Uebersicht der Vögel Nord-ost Afrikas,' &c., p. 11.

† Dr. Rüppell unites *Hypotriorchis* and *Tinnunculus*, as indicated by his plac-

and it is remarkable that he does not include *Hypotriorchis subbuteo* in the list, though a migratory bird in Europe, and mentioned by Dr. A. Smith to occur at the Cape of Good Hope.

No. 19. There is a *FALCO PUNICUS*, Levaillant, "Exploration Scientifique de l'Algérie, *Oiseaux*, pl. 1, 1847" (as cited by Mons. A. Malherbe), which may perhaps be *F. peregrinator*. Dr. Hartlaub is disposed to think it a local variety of *F. peregrinus*.*

No. 42. As it seems doubtful whether No. 41 is not the true *ACCIPITER VIRGATUS*, (Tem.), of the Malay countries, a note of doubt should be placed after this habitat as assigned to No. 42.

No. 61. As far as can be judged from Dr. Rüppell's figure of *BUTEO RUFINUS*, this certainly would not seem to represent the common Indian Buzzard; but we may suppose that Mr. G. R. Gray has good authority for the identification, although it does not appear from his last catalogue of the British Museum *Raptores*, that there is an African specimen of this bird in the national collection.

No. 71. We can find nothing in the descriptions of *MILVUS ATER* by M. Degland and others, which does not apply to the Indian *M. govinda*, and bear out Mr. Strickland's opinion of their identity. In *Proc. Zool. Soc.* for 1834 or 1835 (we are necessitated to quote from memory), a recent specimen of *M. ater* shot at Erzeroum or Trebizond is described to have had orange-brown (?) irides, whereas those of the Indian Kite are dark brown.

P. 317. The prior name *BAZA*, Hodgson, should be substituted for *Aviceda*, Swainson, among the *Perninæ*.

Summary View of the Indian RAPTORES, considered in relation to those of other regions. On glancing over the list of Indian raptorial birds, the faunist, familiar with European ornithology, cannot fail to be struck with the number of European species of *DIURNÆ* which likewise inhabit India:—all, in fact, with the exceptions of a few stragglers from Africa or America, the Jer Falcons of the north (and even one of these we have admitted, on what appears to be satisfactory

ing *F. concolor*, Tem., in the latter.—Since writing the above, we have been fortunate in obtaining a live specimen of *F. chicquera*, observation of which inclines us now to regard it as an aberrant *Tinnunculus*,—certainly not a *Hypotriorchis*.

* "Bericht über die Leistungen in der Naturgeschichte der Vögel während des Jahres 1847," p. 14.

native testimony, as an exceedingly rare visitor in the N. W.), and finally *Haliaëtus albicilla*, *Milvus regalis*, *Archibuteo lagopus*, and *Tinnunculus æsalon*. The two last mentioned are known only as winter visitants in S. Britain, but all are more or less seen in N. Africa, and it is remarkable that *Archibuteo lagopus* is likewise met with at the Cape of Good Hope. We believe, too, that all of these are found throughout northern Asia. Certain European species, however, as *Pernis apivora*, are severally replaced in India by closely affined races (perhaps not in all instances distinguishable); and the same is perhaps the case with *Milvus niger*, and would have been averred of *Buteo vulgaris*, only that the latter would itself appear to inhabit a loftier elevation than the common Indian Buzzard on the Himalayas and likewise the Nilgiris. With the NOCTURNÆ, on the contrary, the species appear to be throughout distinct in the two regions, save only *Asio otus* and *A. brachyotus*, and *Scops Aldrovandi* and *Syrnium aluco*; though both of the latter are, in general at least, so far distinct in their plumage, that the Indian race of each may be regarded as a marked variety, or as one of the many instances in which it is not likely that zoologists will ever be agreed about considering as a distinct species or not. Again, of these four, *Asio otus* and the *Syrnium* are confined to the Himalaya, the *Scops* is widely diffused, and *A. brachyotus* is an erratic winter visitor in the plains, by no means rare in Lower Bengal. Of the non-European Indian species of DIURNÆ, a few belong to the high table-lands of central Asia, and are little known on the Indian side of the Himalayan snows: such are *Archibuteo hemiptilopus* and *Buteo aquilinus* and *B. plumipes*. *Falco sacer* appears to be a rare mid-Asian bird, scarcely perhaps more frequent in the Himalaya than in E. Europe. Other species inhabiting Europe and northern Asia which in India would appear to be peculiar to the Himalaya, are *Aquila chrysaëtos*, *Astur palumbarius*, and *Circus cyaneus*; also *Vultur monachus* and *Gyps fulvus*: and among the NOCTURNÆ (as before remarked) *Asio brachyotus* and *Syrnium aluco*, var.* It is remarkable that there is not a single raptorial species common to India and Australia; unless, indeed, the Indian Kite may yet prove to be identical with *Milvus affinis*, Gould, *Falco peregrinator* with *F. melanogenys*, Kaup,

* Perhaps also *Bubo maximus* and *Athene psilodactyla*. *Gypaëtos barbatus*, var., should perhaps be in like manner substituted for *G. himachalanus*.

and *Baza Reinwardtii* with *B. subcristata*, Gould: but many are common to India and the great Indonesian archipelago, and some to both of these regions and to Africa. Our list contains a few which are exclusively Malayan or Indonesian, *e. g.* *Baza Reinwardtii*, *Accipiter nisoides*, *Spizaëtus alboniger*, *Pontoaëtus humilis*, and *Scops superciliaris* (? *v. rufescens*): other Malayan species reach only (so far as known) to the Tenasserim provinces, as *Hierax fringillarius*, *Buteo pygmæus* (?), and *Syrnium seloputo*; or still further to Arakan, as *Ketupa javanensis*; or again further to the S. E. Himalaya, as *Phodilus badius*; or the Himalaya generally (visiting the plains of Bengal and Upper India in winter), as *Hypotriorchis severus*. Of species more or less common to all India (in suitable localities) and Indonesia, being moreover peculiar to these regions, may be enumerated *Falco peregrinator* (?), *Pernis cristata*, *Astur trivirgatus*, *Accipiter virgatus* (? *besra*), *Micronisus badius*,* *Spizaëtus cirratus*, var., *Ictinaëtus malaiensis*, *Poliornis teesa*,† *Pontoaëtus ictinaëtus*, *Haliaëtus Maccei* (?), *Haliastur indus*, and *Milvus govinda* (?); also *Otogyps calvus* (?) and *Gyps indicus*: and among the NOCTURNÆ, *Bubo orientalis*, *Scops lempiji*, *Syrnium indrani*, and *Strix javanica*. Others, again, are common to those two regions and to Africa, as *Elanus melanopterus*, *Hæmatornis cheela* (*bacha* ?), *Blagrus leucogaster*, *Gyps bengalensis*, and *Ninox scutellatus* (Madagascar); or to India and Africa exclusive of Indonesia (?), as *Tinnunculus chicquera*, *Aquila nævioides*, and *Buteo rufinus* (?); to which may be added (though European rarities), *Circaëtus gallicus*, *Circus Swainsonii*, and *Hieraëtus pennatus*.

The species of raptorial birds peculiar to India are remarkably numerous, especially among the NOCTURNÆ; those, at least, which at present are only known to inhabit India. Some are very local, as *Athene castanotus* in Ceylon, *Ath. malabaricus* on the Malabar coast, *Ath. Brodiei* and *Ketupa flavipes* in the Himalaya; and of the three remaining species of *Athene*, *Ath. radiata* is also peculiar but more generally diffused, *Ath. brama* extends into Persia, and *Ath. cuculoides* is the only one we have seen from the eastern side of the Bay of Bengal, though in India it is confined to the Himalaya, and it spreads eastward

* Found also in Afghanistan.

* Or this should rather be considered a true Indian species, which extends its range into the Malayan peninsula and probably not much beyond.

so far as Chusan, and southward to the Tenasserim provinces.* Other fine Owls peculiar to India (or nearly so), are *Bubo bengalensis* and *B. coromander*, *Ketupa ceylonensis*, and *Syrnium sinense*, pretty generally diffused, and the *Ketupa* only appearing (so far as we have seen) on the eastern side of the Bay of Bengal; *Glaux candida* is found chiefly in Central India and parts of Upper Bengal. Not one of these species appears to be known in the Malay countries, and we are aware of only *Bubo bengalensis* having been met with in Afghanistan. Of *Syrnium indrani* we have seen three examples from Malacca, whence may be inferred that this Indian species is there not rare, and probably also inhabits some of the islands. Of *DIURNÆ*, the Himalayan Lam-mérgeyer, if not distinct, is certainly a well marked variety, found also in Afghanistan. Among the *Falconidæ*, so far as we at present know, the following species are peculiar to India. *Falco juggur*, *Baza lophotes*, *Spizaëtus Kieneri*, *Aquila hastata*; the long-crested race of *Spizaëtus cirratus*; *Accipiter virgatus* (? *besra*); *Circus melanoleucos*, which inhabits all India and Ceylon, with Arakan and the Tenasserim provinces; *Hierax eutolmos*, from Nepal and Asám to Tenasserim; *H. melanoleucos*, Asám; *Spizaëtus nipalensis*, Himalaya and mountains of Ceylon, and perhaps identical with a Japanese species, as suggested by Mr. G. R. Gray. The genus *Hierax* occurs only in the N. E. extremity of India; and the various large fishing Eagles, excepting the Osprey, and perhaps *Blagrus leucogaster*, appear to be little known in S. India.

Several of the non-European *Falconidæ* of India are distinguished by an occipital crest, either rudimental or developed to a considerable length, and which is commonly held erect or nearly so; it is also generally accompanied by a peculiar style of marking of the plumage, exemplified especially by the three gular lines from which *Astur trivirgatus* takes its name.† These crested *Falconidæ* are *Pernis cristata*, *Baza lophotes* and *B. Reinwardtii*, *Astur trivirgatus*, the different *Spizaëti*, and *Hieraëtus pennatus* rudimentally; some of which birds, as the first three and the rest respectively, exhibit little mutual affinity in other particulars.

(To be continued.)

* The Tenasserim *Ath. castanoptera* apud Helfer is in need of further determination.

† *Accipiter virgatus* (? *besra*) and *nisoides* exhibit the same gular lines unaccompanied by an occipital crest.

Additional Notice of the Shou or Tibetan Stag.—By B. H.
HODGSON, Esq.

Since my recent account of the Tibetan Stag was submitted to the Society I have been enabled, through Dr. Campbell's kindness, to examine another specimen consisting of a nearly complete head and horns with the skin on, and inclusive of the skull, which however wants the lower jaw. These are the spoils of a male, and a mature or rather aged male, as is evidenced by the inferior size of the horns, by the partially obliterated sutures of the skull, and by the well-worn canine teeth; and, as this magnificent animal is a tenant of one of the strangest and most interesting regions of the earth, I need make no apology for devoting a few more lines to the description of this second, and in some respects superior, sample of it. The skin is not entirely separated from the skull, nor am I permitted wholly to remove it; but the specimen, as it stands before me, affords satisfactory means of testing the characters, and obtaining most of the dimensions, of both head and skull, and I shall accordingly give a summary notice of both, in completion of my prior paper on the Shou.

The head with its integuments is about 18 inches long, of straight measurement from the snout to the occipital jut, and about 7 inches wide between the salient angles of the brows which project more to the sides than do the cheek bones and consequently exhibit the maximum of breadth. The bridge of the nose inclines to a curve or "Roman" shape. The forehead is broad and flat, seeming to have even a slight dip or depression before the bases of the horns. The muffle, or nude extremity of the nose, is small but distinct, smaller than in any congener I ever saw, but yet unmistakeably developed. It occupies the space between the nostrils, and descends narrowing on the front of the upper lip, till at the margin or aperture of the mouth, the nude moist part of the lip is reduced to less than three quarters of an inch in breadth. The larmiers or suborbital fissures are of medial size, and nude inside as well as round their edges. They are much smaller than in the Rusas, but fully as large as in the Red Deer. The ears are remarkably long ($9\frac{1}{2}$ inches), narrow and pointed, and their copious lining of soft hair, not less than the limited muffle, indicates the extreme coldness of the animal's abode.

